

5.3 Mixed-grass Prairie (Missouri Coteau)

Area: 10,290,000 acres (4,164,000 ha)

Description and Overall Condition: This landscape component includes the mixed-grass prairie of the Missouri Coteau and associated wetlands. This region marks the boundary of the western limits of glaciation in North Dakota. The hummocky, rolling hills of the Missouri Coteau dramatically rise 150 to 500 feet above the Drift Prairie. A high concentration of wetlands are present, roughly 800,000 basin acres. Alkaline lakes are also more prevalent here. Streams and rivers are nearly absent, as are upland deciduous forests but tracts of aspen parkland occur in the north. A considerable amount of native prairie remains and this region provides primarily for cattle grazing. Areas of reduced slope, particularly the western edge, have been converted to cropland such as small grains, sunflowers, corn, and alfalfa hayland. The Coteau is known for supporting some of the highest numbers of breeding ducks in North America. Due to the large amount of grassland and wetlands which remain or have been restored, this area is especially crucial to many other species and constitutes the focus area “Missouri Coteau Breaks.” Much of the Coteau is classified as good to outstanding for wind energy potential, which could pose the threat of habitat fragmentation. Irrigation and new advances in cropland could allow for native prairie to be farmed. Oil and gas activity is established in the extreme northwest.

Predominant Natural Vegetation:

Grasses: prairie junegrass, little bluestem, needle-and-thread, blue grama, green needlegrass, porcupine grass, prairie cordgrass, Northern reedgrass, plains muhly, Western wheatgrass, Kentucky bluegrass,

Forbs: pasque flower, torch flower, yarrow, gumweed, golden aster, prairie rose, Missouri milkvetch, purple loco, lead plant, Indian breadroot, purple prairie-clover, gaura, hairy puccoon, harebell, goldenrod, smooth fleabane, perennial ragweed, purple coneflower, upland wormwood, green sage and fringed sage.

Associated Species of Conservation Priority:

Birds	Mammals	Reptiles/Amphibians
American Bittern Northern Pintail Northern Harrier Swainson's Hawk Ferruginous Hawk Sharp-tailed Grouse Willet Upland Sandpiper Marbled Godwit Wilson's Phalarope Short-eared Owl Loggerhead Shrike Sedge Wren Sprague's Pipit Lark Bunting Grasshopper Sparrow Baird's Sparrow Le Conte's Sparrow Nelson's Sharp-tailed Sparrow Chestnut-collared Longspur Dickcissel Bobolink	Richardson's Ground Squirrel	Plains Spadefoot Canadian Toad Smooth Green Snake Western Hognose Snake

Other Characteristic Wildlife:

Birds: American wigeon, green-winged teal, mallard, blue-winged teal, Northern shoveler, gadwall, lesser scaup, red-tailed hawk, American kestrel, gray partridge, ring-necked pheasant, spotted sandpiper, killdeer, mourning dove, common nighthawk, Western kingbird, Eastern kingbird, horned lark, American crow, Eastern bluebird, common yellowthroat, clay-colored sparrow, vesper sparrow, Savannah sparrow, Western meadowlark, brown-headed cowbird

Mammals: white-tailed jackrabbit, snowshoe hare, thirteen-lined ground squirrel, Northern pocket gopher, olive-backed pocket mouse, Western harvest mouse, deer mouse, Northern grasshopper mouse, prairie vole, meadow vole, meadow jumping mouse, coyote, red fox, raccoon, badger, striped skunk, white-tailed deer

Reptiles and Amphibians: Great Plains toad, Woodhouse's toad, Northern leopard frog, chorus frog, tiger salamander, plains garter snake, common garter snake, yellowbelly racer, bullsnake

5.3.a Focus Area: Missouri Coteau Breaks

Area: 5,765,000 acres (2,333,000 ha)

Public Landholdings: 308,200 acres (NDGFD 17,700; NDSLD 155,000; USFWS 192,000; USBLM 640)

Description and Condition: Rolling, steep topography has spared much of this area from being farmed. Native prairie remains intact among areas tilled for wheat or hayed. Cattle grazing is the most common use. Abundant wetlands of all classes occur throughout. A great amount of conservation effort, including grassland easements, has been directed to the Coteau especially within the last 15 years.

Key Species of Conservation Priority

Birds: American bittern, Northern pintail, Northern harrier, Swainson's hawk, ferruginous hawk, sharp-tailed grouse, willet, upland sandpiper, marbled godwit, Wilson's phalarope, short-eared owl, loggerhead shrike, sedge wren, Sprague's pipit, lark bunting, grasshopper sparrow, Baird's sparrow, Le Conte's sparrow, Nelson's sharp-tailed sparrow, chestnut-collared longspur, dickcissel, bobolink

Mammals: Richardson's ground squirrel

Reptiles and Amphibians: spadefoot toad, smooth green snake



The rolling hills of the Missouri Coteau.

5.3.b Conservation Problems and Actions for the Mixed-grass Prairie (Missouri Coteau)

MIXED-GRASS PRAIRIE (Missouri Coteau)				
CONSERVATION PROBLEM	CONSERVATION ACTION	POTENTIAL PARTNERS		
Direct Loss of Habitat				
Moderate loss of native prairie.	Protect native prairie where possible, particularly within the Missouri Coteau Breaks (e.g. easements or land acquisition).	NDGFD USFWS NRCS PPJV	NDNRT DU TNC Audubon PF	Private Landowners
Habitat Fragmentation				
Highly fragmented with roads, shelterbelts, and agricultural practices.	Consider removal of dilapidated shelterbelts or stands of trees within grassland, particularly within 50 meters of grassland patches >100 ha.	NDGFD USFWS USFS NRCS PPJV	TNC	Private Landowners Volunteers
Habitat Degradation				
Improper grazing practices.	Implement grazing systems to benefit mixed-grass prairie species.	NDGFD USFWS USFS NRCS PPJV NDSLD	DU TNC	Private Landowners NDSUEXT
Loss of fire regime.	Work cooperatively with state and federal agencies to develop BMPs that promote use of fire.	NDGFD USFWS USFS NRCS NDSLD	TNC	
Long term haying of native prairie.	Find alternative hay sources (e.g. grass banks)	No partners identified.		
Invasive and Noxious Species				
Noxious weeds (e.g. leafy spurge).	Control noxious weeds through biological and chemical methods.	NDGFD NDSLD USFWS USFS NRCS	NDWCA	Private Landowners NDSUEXT
Woody encroachment.	Use fire or other tools to prevent woody invasion of grassland.	NDGFD NDSLD USFWS USFS NRCS	TNC	
Pesticides				
Pesticide drift and application.	Work with state and federal agencies to enforce existing pesticide regulations.	NDGFD NDDAG USFWS USFS		Private Landowners
Industrial Development				
Wind energy potential is fair to excellent.	Coordinate with wind energy companies to minimize impacts.	NDGFD USFWS		WIND NDSEED

MIXED-GRASS PRAIRIE (Missouri Coteau)				
CONSERVATION PROBLEM		CONSERVATION ACTION		POTENTIAL PARTNERS
Data Gaps				
Lack of baseline information on SoCP.	Survey areas of data gaps. Conduct research/surveys to establish baseline information on SoCP.	NDGFD NDSLD USFWS USFS NPWRC PPJV	DU TNC	Volunteers Universities
Conservation Awareness				
Continuing education.	Create informational brochures, use tools such as television, radio, newspapers, magazines, and public forums, to provide information to citizens on the need for conservation of fish and wildlife resources and habitat.	NDGFD USFWS USFS NRCS	DU TNC Audubon	NDSUEXT